

Application No. 09/239,907
Reply to Advisory Action dated March 25, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

C 1. (Currently Amended) A receiver for demultiplexing a digital data stream, the digital data stream including data packets each having a packet identifier, so as to retain only those data packets required by the receiver, the receiver comprising:

input circuitry for receiving the digital data stream;

a memory for storing packet identifiers of data packets required by the receiver;

D 1 a first control circuit for controlling the storage in the memory of the packet identifiers;

a second control circuit for extracting a packet identifier from a data packet in the digital data stream input to the input circuitry; and

a third control circuit for receiving the extracted packet identifier and determining whether such matches one of the packet identifiers stored in the memory, for setting a match signal to the second control circuit responsive to a match, and for outputting an address in the memory of the extracted packet identifier responsive to a match, wherein the second control circuit accesses the address in the memory to retrieve control information associated with the packet identifier and demultiplexes the input data packet responsive to the match signal.

2. (Cancelled)

3. (Previously Amended) The receiver of claim 1 wherein responsive to the control information the second control circuit controls the transfer of the input data packet to a destination address identified by the control information.

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4. (Previously Amended) The receiver of claim 1, wherein responsive to the control information the second control circuit processes the input data packet and transfers the processed input data packet to a destination address identified by the control information.

5. (Original) The receiver of claim 1 wherein responsive to the match signal not being set, the second control circuit discards the input data packet.

6. (Original) The receiver of claim 1 in which the digital data stream is an MPEG-2 encoded stream.

7. (Previously Amended) The receiver of claim 3 in which the input data packet comprises a packetized elementary stream.

8. (Previously Amended) The receiver of claim 4 in which the input data packet comprises program specific information, and the receiver further comprises a filter controlled by the second control circuit for filtering sections in the input data packet so as to retain only those data packets having sections required by the receiver.

9. (Original) The receiver of claim 1 in which first control circuit is a receiver processor, the second control circuit is a transport processor, and the third control circuit is a search engine.

10. (Currently Amended) A set-top-box including a receiver for demultiplexing a digital data stream, the digital data stream including data packets each having a packet identifier, so as to retain only those data packets required by the receiver, the receiver comprising:

input circuitry for receiving the digital data stream;

a memory for storing packet identifiers of data packets required by the receiver;

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a first control circuit for controlling the storage in the memory of the packet identifiers;

a second control circuit for extracting a packet identifier from a data packet in the digital data stream input to the input circuitry; and

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a third control circuit for receiving the extracted packet identifier and determining whether such matches one of the packet identifiers stored in the memory, for setting a match signal to the second control circuit responsive to a match, and for outputting an address in the memory of the extracted packet identifier responsive to a match, wherein the second control circuit accesses the address in the memory to retrieve control information associated with the packet identifier and demultiplexes the input data packet responsive to the match signal.

11. (Currently Amended) A method of demultiplexing a digital data stream input to a receiver, the digital data stream including data packets each having a packet identifier, so as to retain only those data packets required by the receiver, comprising the steps of:

inputting the digital data stream;

storing in a memory, under the control of a first control circuit, all packet identifiers of data packets required by the receiver;

extracting, under the control of a second control circuit, a packet identifier from a data packet in the input digital data stream;

determining, under the control of a third control circuit, whether the extracted packet identifier matches one of the stored packet identifiers;

setting a match signal responsive to a match determined by the third control circuit;

outputting, responsive to a match, the an address in memory of the extracted packet identifier;

accessing, under the control of the second control circuit, the address in memory;

retrieving control information associated with the packet identifier and stored at such address; and

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demultiplexing, under the control of the second control circuit, the input data packet responsive to the match signal.

12. (Cancelled)

13. (Previously Amended) The method of claim 11 further comprising the step of:
transferring, under the control of the second control circuit, the input data packet to a destination address identified by the control information.

14. (Previously Amended) The method of claim 11 further comprising the steps of:
processing, under the control of the second control circuit, the input data packet in dependence on the control information; and
transferring, under the control of the second control circuit, the processed input data packet to a destination address identified by the control information.

15. (Original) The method of claim 11 in which the step of demultiplexing comprises discarding the input data packet responsive to the match signal not being set.

16. (Original) The method of claim 11 in which the digital data stream is an MPEG-2 encoded stream.

17. (Previously Amended) The method of claim 16 in which the input data packet comprises a packetized elementary stream.

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18. (Original) The method of claim 16 in which the input data packet comprises program specific information, and wherein said processing step comprises:

filtering sections in the input data packet so as to retain only those data packets having sections required by the receiver.

19. (Original) The method of claim 11 in which the step of determining a match comprises systematically searching the memory.

cm 20. (Currently Amended) A method of decoding a broadcast digital data signal in a set-top-box comprising inputting the digital data stream;

storing in a memory, under the control of a first control circuit, all packet identifiers of data packets required by the receiver;

extracting, under the control of a second control circuit, a packet identifier from a data packet in the input digital data stream;

determining, under the control of a third control circuit, whether the extracted packet identifier matches one of the stored packet identifiers;

setting a match signal responsive to a match determined by the third control circuit;

outputting, responsive to a match, the an address in memory of the extracted packet identifier;

accessing, under the control of the second control circuit, the address in memory;

retrieving control information associated with the packet identifier and stored at such address; and

demultiplexing, under the control of the second control circuit, the input data packet responsive to the match signal.